

### **Amendments to the Claims**

This listing of the claims will replace all prior versions, and listings, of claims in the application:

#### **Listing of claims:**

1. (currently amended) An assembly including a substrate and a conductive trace disposed on the substrate, wherein the trace includes nanotube segments that contact other nanotube segments to define a plurality of unaligned nanotubes for providing a plurality of conductive pathways along the trace.
2. (currently amended) The assembly of claim 1 wherein the nanotubes ~~segments~~ include single walled carbon nanotubes.
3. (currently amended) The assembly of claim 1 wherein the nanotubes ~~segments~~ include multi-walled nanotubes.
4. (currently amended) The assembly of claim 1 wherein the nanotubes ~~segments~~ have different lengths.
5. (currently amended) The assembly of claim 1 wherein the nanotubes ~~segments~~ include ~~segments~~ nanotubes having a length shorter than the length of the article.
6. (currently amended) An assembly including a substrate and a conductive trace disposed on the substrate, wherein the trace includes an electrical network of a plurality of unaligned nanotubes in contact with other nanotubes to ~~define~~ provide a plurality of conductive pathways along the trace.
7. (original) The assembly of claim 6 wherein the nanotubes include single walled carbon nanotubes.

8. (original) The assembly of claim 6 wherein the nanotubes include multi-walled carbon nanotubes.
9. (original) The assembly of claim 6 wherein the nanotubes have different lengths.
10. (original) The assembly of claim 6 wherein the nanotubes include nanotubes having a length shorter than the length of the ribbon.
11. (currently amended) An assembly including a substrate and a conductive trace of predefined shape, the conductive trace being over the substrate, the conductive trace including a plurality of unaligned nanotubes ~~in electrical contact to form~~ for providing a plurality of conductive paths along the extent of the trace.
12. (currently amended) An assembly including a substrate, at least one metal electrode, and a conductive trace of predefined shape, the conductive trace being over the substrate, the conductive trace including a plurality of unaligned nanotubes ~~in electrical contact to form~~ for providing a plurality of conductive paths along the extent of the trace, and the metal electrode being over at least a portion of the conductive trace, the metal electrode being formed by a metallization step.
13. (currently amended) A wafer substrate structure having a non-woven fabric of unaligned nanotubes covering a major surface of the wafer substrate and wherein the nanotubes of the fabric are arranged in accordance with inherent self-assembly traits of the nanotubes.
14. (currently amended) A wafer substrate structure having a non-woven fabric of unaligned nanotubes covering a major surface of the wafer substrate and wherein the fabric is substantially a monolayer of nanotubes.
15. (currently amended) A wafer substrate structure having a non-woven fabric of unaligned nanotubes covering a major surface of the wafer substrate and wherein the fabric has a controlled density of nanotubes.